

 Spider

Source Code Management and an Introduction to Git

Learn to work with Code.

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The Agenda

- Need for Source Code Management
- Version Control Systems
- Git
- Demonstration
- Task for You
- Questions?

Why Source Code Management?

- Collaboration in a Team
- History
- Release Notes
- Change Notifications
- Saves you from Insanity

Version Control Systems

Version control is a system that records changes to a file or set of files over time so that you can recall specific versions later.

Common Source Code Management Tools :

- Subversion
- Git
- Mercurial
- Bazaar

Types of SCM Tools :

- Centralized
 - Main Copy in a single place
 - Example : Subversion
- Distributed
 - Everyone has a full copy
 - Example : Git

Common Vocabulary

- **Repository**
 - Place where the Source Code is kept.
- **Checkout**
 - Download a copy of the source to your local system.
- **Commit**
 - Saving your changes to the Repository.
- **“I checked out the code this morning, made some changes, and committed them back to the repository.”**

- **Branching / Forking**

- Copying the Code to another section of the repository so it doesn't interfere with other code.

- **Merging**

- Taking two sets of code and making them one.
- Major Issue : Conflict Resolution.

Git

- Is distributed
- Has no master copy
- Has fast merges
- Scales up
- Convenient tools still being built
- Safeguards against corruption
- Available for multiple platforms

Demonstration

1. Creating a Git Repository
2. Pushing code to a remote server
3. Contributing code to an existing Repo

Task for you

Join Github, it's free.

Clone the Binary Search Tree Repository and write code for one of the methods that haven't been implemented so far or find and fix our mistakes and then submit a pull request.

Browse Github for projects that match your area of interest, trust me there are thousands of them so you'll definitely find something. If possible try to fix a bug or implement a new feature.

Questions?